

Game-Based Language Learning for Pre-School Children: A Design Perspective

Bente Meyer

Department of Learning and Philosophy, Aalborg University, Copenhagen, Denmark

bm@learning.aau.dk

Abstract: During the last decade there has been a growing focus on preschool learning within education, especially with regard to the learning of basic literacies such as reading and writing. In addition to this many nation states increasingly focus on the basic literacy competences of the information society, ICT and English. This has, as suggested by for instance Scanlon and Buckingham (2007) boosted opportunities for the sale of educational material and hardware to children for home learning, but also for learning material that links content directly to the curriculum, to school work and to assessment. This paper will focus on the design of learning material for pre-school teaching and learning through the example of a game-based platform for learning English called Mingoville.com. Mingoville has been studied in connection with the project Serious Games on a Global Market Place (2007-11), where a number of games were followed into classroom environments across nations. Currently, the developers of Mingoville are working on a platform version that targets preschool learners and works on tablets as well as pcs and smartboards. The paper will discuss the implications of redesigning the platform for pre-school teaching and learning and how this affects game-based language teaching and learning with Mingoville.

Keywords: language learning, game-based learning, design for preschool learning

1. Introduction

The teaching of English is a growing focus of many nation states as English is considered to be a key competence in the information society (Graddol 2006). Consequently, many nation states focus on teaching English to children at the early stages of schooling, a strategy that may create both competent citizens and competitive nation states (Hansbøl & Meyer 2011, Shore & Wright 1997). In addition to this preschool levels are increasingly under pressure – from political actors as well as from parents - to introduce children to basic literacies such as reading, writing and understanding languages (Scanlon & Buckingham 2004). This calls for new learning designs and new learning materials for preschool and primary school levels.

Following Scanlon and Buckingham (2007) it can be argued that computers and software are heavily marketed to parents as a means of ensuring the academic success of their children in a context of increasing educational competition and marketization. Like early language skills in English, digital literacy is often conceptualised by nations, parents and schools as a competence that contributes significantly to successful learning. The consequence of these tendencies is that the market for digital learning material for children is growing and that commercial interests in learning and schooling increasingly interact with the school market for digital learning. One aspect of this is an extension of learning and learning materials into the home, a pedagogisation of leisure time in which parents will become educators and children learners. As Buckingham and Scanlon argue, “the home will increasingly come to be seen as an extension of the school, and...the kinds of ‘informal’ learning that might occur in the home will be increasingly curricularized” (Scanlon & Buckingham 2007). This home-school interaction is an interesting new space for research in game based language learning, as learning materials that are available online will inevitably support learning in a variety of environments. It can be argued that games often make connections between different sites of learning as they can be used for both entertainment and learning and therefore operate in between these activities.

This paper is based on the analysis of Mingoville.com, a game-based platform which addresses the market for teaching and learning English online in a global context – and which focuses on both home and school learning. Mingoville is an interesting focus for the study of game-based language learning because it targets young learners on a global market for education, and because it is a platform that continually seeks to adapt to the needs of parents, children, nations and schools. In connection with a recent research project¹ Mingoville was one of several game based platforms studied in research of

¹ Serious Games on a Global Market Place 2007-11. Funded by the Danish Council for Strategic Research

the global market for game based learning². In this project data were collected through interviews with educational actors such as teachers, pupils, school leaders, policy makers and platform developers, as well as through observations in classrooms (Egenfeldt-Nielsen, Sørensen & Meyer 2011). In 2012, an additional interview was made with a company representative of Mingoville who is a significant actor in the development of the platform for preschool learning. The purpose of this interview was to understand how the company has conceptualised and worked with a new version of the platform, a game based design for preschool language learning.

Drawing on these data, the paper asks how Mingoville is conceptualised as a game based platform for early language learning and what positions it may occupy in language learning in a global context.

2. Principles of early language learning

Early language learning is, as mentioned above, a strategic focus in many educational systems across the world, as language skills – specifically in English – are understood to contribute to forging competent 21st century learners and citizens. Edelenbos et al (2006) for instance report that since the late 1990s there has been an increase in the early teaching of English in a number of countries in Europe. Similar tendencies are seen outside Europe (Meyer, Sørensen, Hanghøj & Birch Andreasen 2011, Graddol 2006). The idea behind these initiatives is generally that early language learning will produce successful language learners, a perspective that can also be found in research, where an early language start is often seen as an advantage.

However, where the political arguments for teaching languages to young learners are generally clear, the recommendations made by research are more cautious and often stress that the age of the pupils is not the only parameter for successful learning (Blondin et al. 1998, Edelenbos 2006).

This means that though there are indications that young learners are more open to and engaged in learning a new language – and that early beginnings may give them a head start on learning - issues such as pedagogy, teacher education and feedback, exposure, distribution of lessons and progression are also significant. This supports the idea that the design of learning material for young learners that address several of these contextual issues is of great significance to the quality of learning.

Experiences with the use of online learning in early language education shows that online material, if properly designed, can support learning in terms of provided input, continuity and positive feedback (Waschk 2004). These indications are significant as one of the challenges of early language learning is to provide exposure to the target language, time for instruction and learning and qualified feedback for learners. A platform like Mingoville may therefore provide language learning with added value in terms of supplying learners with more opportunities to encounter and produce language, and with qualified feedback that supports engagement and confidence in using the language. In this sense the platform may operate in between self-directed and teacher directed learning, i.e taking the role of a tutor or substitute teacher. In the role of a tutor the platform may relieve the teacher or provide instruction and feedback that the teacher cannot give, a role that may become increasingly significant as the pressure on teaching English to very young learners grows. The space for incorporating Mingoville preschool in language learning may therefore grow as political pressure increases at this level of schooling.

3. Games and language learning

Unlike most other school subjects foreign language learning has a long history of integrating games into learning, a history that began with paper, card and classroom games before digitalisation (Baltra 1990, Gaudart 1999, Li & Topolewski 2002, Crookall 2007, Ranalli 2008). Generally, games in language learning are associated with intrinsic motivation, meaningful exposure to the target language, as well as perceived associations between children's language play and second/foreign language learning. Crookall (2007) for instance underlines "the need to integrate play into learning models" based on research in language play in children's socialisation and early language play. Baltra similarly argues that "Playing is a very old and widespread form of learning and young children do their learning mainly through games or game-like activities. It is then not surprising that most educational activities in the preschool years try to simulate games" (1990, 446). Though the game

² Other game based platforms studied were for instance Movie Star Planet, www.moviestarplanet.com and Global Conflicts, www.globalconflicts.eu

may be “over at school” (Baltra 1990) or after primary schooling (Gaudart 1999) due to academic pressure and the culture of serious learning, games have been continually associated with language learning and the development of communicative fluency in another language.

Outside formal education, games are often significantly involved in children’s encounters with other languages online – particularly English (Meyer 2006, 2001, Sørensen & Olesen 2000). In Denmark, most children are therefore familiar with English words, phrases and sounds before they start learning the language in school and they may associate game activities with this knowledge. Game based learning of languages therefore transcends the formal/informal context for learning – though the language may be learned in different ways in these contexts.

Games are often difficult to integrate into formal learning. However, a recent study (Egenfeldt-Nielsen 2011) concludes that “foreign language teachers believe that there is a larger potential for pupils to learn more from games in their subject compared to teachers of other subjects” (198). The same study points out that adaptation of computer games is generally higher in the lower grades of primary school and that – somewhat surprisingly - female teachers are more likely to use games than male teachers. This may indicate that foreign language teachers are more keen on using games for language education with young learners – and that games may have a specific role to play in the design of curricula for early language learning.

The intimate relationship between language learning and gaming to some extent derives from communicative approaches to language teaching and learning used in classrooms since the 1970s. These approaches underline the significance of the social aspects of language, for instance learners’ interaction with others in the target language and the use of authentic learning materials for learning (see for instance Garcia-Carbonell, Rising, Montero and Watts 2001, Hymes 1979). The idea of the learner’s immersion into an environment where situated response and learning is immanent, is something that game based learning and language learning may have in common – an argument that has been explored extensively by the journal *Simulation and Gaming* during the last two decades (see for instance Crookall 2007, Halleck 2007, Peterson 2010). One aspect of a communicative approach to learning a language is therefore role play and simulations as activities in which learners use language for meaningful communication with others and for simulated real-life purposes (Crookall & Oxford 1990, Coleman 1995, Wagner 1990).

This focus on contextualising language use through gaming affects teacher’s use of learning materials and activities in language education as well as the relationship between teacher and learners. Crookall (2007) for instance claims that the use of simulations and games are widespread and encouraged in language learning as the integration of game and simulation activities in language learning material has almost become a ‘guarantee’ of learner inclusion and creativity. Garcia-Carbonell et al (2001) similarly propose that games reorganise the authority structure of the classroom, in effect “declassrooming the classroom” (Sharrock & Watson 1987), thereby opening up the classroom to real-world communication and to more learner centered activities. Games then – if used appropriately - can provide contextualized input in language learning and provide challenge and competition to engage young learners in self-directed learning (Baltra 1990, Crookall 2007, Li & Topolewsky 2002, Garcia-Carbonell, Rising, Montero and Watts 2001).

Games, however, are not only immersive, as suggested by a number of the above mentioned research papers, they are also used for training and repetition of learned language (Hansbøl and Meyer 2011). This implies that research in game based language learning must distinguish between for instance game formats, genres and activities. In addition to providing engaging and contextualised environments for language learning games in primary education are thus often used to support the learning of skills through repetition and drills, for instance for basic vocabulary training. In continuation of this Wagner (1990) suggests that three types of game activities can be identified in language education: a) games for repetition and memorization b) games for problem solving and c) role play and scenarios. Type a) games are typically drill based exercises, for instance for vocabulary training, where the game acts a motivator and ‘motor’ for the production of language. Type b) and c) games, on the other hand, are more complex formats in which learners to a greater extent are active in defining and solving problems as an aspect of being immersed in social context. In Mingoville, type a) games dominate, even though the Mingoville Virtual World apparently provides a more contextualised framework for gaming (see below).

Generally, the significance of game based learning for young learners is underlined by the ways in which games and playful learning are associated with early language learning, as mentioned above (cf. for instance Crookall 2007). In addition to this, game based learning can offer an engaging and safe environment in which children can experiment and make mistakes – something that is specifically significant for young learners' learning (Ortega 1997). According to Gaudart (1999) both simulations and games allow learners not only to practice forms they have already learned, but also to experiment with new structures. Thus, the non-threatening environment of learning with games offers the young learner an opportunity for practice as well as provides immediate and simultaneous feedback. Feedback is important for the young learner in for instance creating continuity in learning, increasing and maintaining motivation and in supporting learning processes where the teacher is not present or close to the child. The combination of game elements and drills may therefore help to open a space for gaming in primary schools across the world where focus is often both on learning basic skills, e.g. vocabulary, and on playful, child-centred learning.

Lately, new platforms such as those provided by handheld devices and tablets have begun to influence how children use technology for game based learning in and out of school and how technologies can be integrated into formal (language) learning. According to several studies, the affordances of the iPad in relation to teaching and learning can be associated with its portability, ubiquitous access, and situated and personalised learning (Melhuis & Faloon 2010, Kinash et.al 2012). These affordances have been connected with the needs of young learners to access technology easily and quickly in all kinds of learning environments (Melhuish & Faloon 2010). In addition to this, several recent studies (Burden et al 2012, Kinash et.al 2012) report that use of iPads at home and in school supports the use of applications that are game-based in nature. Kinash et al for instance mention that the integration of tablets in learning underline pupils' request for not only more game based learning but for both "designing games" and "playing interactive games that help me learn" (2012, 21). In addition to this, Burden et al report that subjects such as mathematics, English and science are more likely to use iPads for teaching and learning. This tendency seems promising for a platform like Mingoville.

4. Mingoville – a language learning platform

Design is a conceptual matrix and a scenario for teaching and learning that is constructed against a background of theory and in relation to practice within a given context or contexts (Sørensen 2009, 2011). In the case of Mingoville, design is one the one hand what changes Mingoville and on the other hand what keeps it stable. As a platform that constantly proliferates in order to reach users and adapt to markets, Mingoville is constantly changing. As a platform that conceptualises learning in certain ways, and that draws on narratives and characters of a specific universe in certain ways, Mingoville stays the same. This is the balance that design must manage, and that Mingoville straddles (Hansbøl & Meyer 2011).

Mingoville is marketed as a global educational resource, that presents itself through simplicity of tasks, design and access but simultaneously attempts to connect to many different kinds of educational needs. These are for example different contexts of learning (school and out-of-school) different age groups, purposes and technologies. Though Mingoville has been developed in a Nordic context of learning, the design and interface of the platform is designed for users worldwide. One aspect of this is the multilingual user design that allows users to e.g. use the dictionary in their own language. According to the webpage Mingoville presently has over 1.000.000 users worldwide, and testimonials from some of these users, for instance teachers and parents, can be seen on Mingoville.com.

Mingoville is licensed, but also free in a number of countries across the world. Currently Mingoville consists of two platform concepts: Mingoville School and Mingoville Virtual World. Originally Mingoville was a one platform concept, Mingoville School (before 2009). Mingoville School is targeted at individual users and contains more than 150 interactive lessons, creative lessons and teacher tools, with a focus on listening to, speaking, writing and reading English. Mingoville Virtual World is targeted at communities of users who can meet, chat and interact with each other through for instance gaming.

When the user accesses the Mingoville platform, he or she must choose between the two platform options, which are respectively presented as containing "learn now" and "play now" activities. The

references to playing and learning (and the tendency to both combine and separate these activities in the tasks) are related to the edutainment aspects of the design. These are summed up in the first principle of learning with the platform, which is *Learning English the fun way*. Another general principle of the platform is that the learner should be *immersed in the language*, a feature which is provided by the game content of the platform and the general use of English throughout the activities. Finally, the platform designers have conceptualised the platform as a learning environment that will support a variety of ways of learning English, as *Not all children learn the same way*.



Figure 1: Learn now or play now

Mingoville Preschool will be launched the summer of 2012 and will work on several platforms, most importantly iPads, that are seen as being specifically relevant for this age group. Since launching the Mingoville Virtual World in 2009, the company has increasingly focused on adapting Mingoville to the variety of platforms that are used both in and out of schools, for instance smartboards, smartphones and iPads – as well as books. The point of adapting Mingoville to many kinds of platforms is of course to get access to users through their preferred platforms, but also to take advantage of the ways in which different forms of interaction can be supported by different platforms and support different learners. The growing role of tablets (e.g iPads) in education was in fact what inspired the company to develop the preschool version of Mingoville, as tablets are thought to support more intuitive navigation than pcs and to enhance the learning of English for children who are not yet confident users of the written language.

5. Negotiating play and learn in Mingoville preschool

Mingoville Preschool builds, as mentioned above, on the characters and principles of Mingoville School and Mingoville Virtual World, which are play and learn platforms the child must choose from after having logged on to Mingoville.com. Mingoville preschool is therefore in some ways an extension of the original platform design which it aims to adapt to the target group in question, i.e. preschool children. Preschool children are in this context understood primarily as children aged 5-7, but can of course also be younger or older children – there are no restrictions in platform usage. As systems of schooling will vary in different parts of the world (Anderson-Levitt 2003), the term preschool learning can refer to both initial schooling and to learning before school, for instance at home or in kindergarten. In Denmark children start school at the age of 7, and there has historically been a clear division between school learning (focused on formal learning and curricula) and preschool pedagogy (focused primarily on play). This division is currently under pressure, as policy makers increasingly curricularize preschool learning by introducing competences and aims that are used to assess children's behaviour and skills (Jensen, Broström & Hansen 2010, Hansen, Bech & Plum 2004). Early learning is therefore a contested field, and possibly a field that will embrace the combination of play and learn approaches that Mingoville preschool offers.

The idea and practice of preschool teaching and learning challenges teachers and pedagogues, as early learning makes new demands on the organisation and practice of teaching. As national curricula are adapted to incorporate an earlier start in English, teacher education cannot always keep up with the teaching of competences that teachers need to teach very young children. Many teachers of languages in primary school are not qualified language teachers (Edelenbos 2006), a fact that may contribute to leaving a space open for a platform like Mingoville – a space for e.g. filling in the role of assistant teacher, and thereby relieving the pressure on the teacher. In our field studies of Mingoville we observed that the lack of qualified teachers in schools in combination with an increased focus on the early teaching of English often opens up the market for Mingoville in countries that have decided to implement a strategy of early English but have not yet had the means to educate teachers to support this strategy. This has for instance been the case in Chile, where a nationwide strategy to increase the English competences of children from the age of 6, *Habla Ingles*, has involved Mingoville (School) as a significant actor in education, as licenses have been bought to teach all children English at this level. The role of Mingoville is in this case meant to be that of an assistant or substitute teacher who will provide the learner with structured tasks and constant feedback in the process of learning – and in a context where teachers are generally not yet ready to take on the task of teaching English to young learners.

6. Feedback and teacher intervention in Mingoville Preschool

Feedback must be a significant aspect of the design of learning material for very young children, as these children need guidance and confidence in using the language. Providing language input is therefore not sufficient to support the learning of the child, learning material must qualify the learning of the language. Feedback and teacher intervention are thus significant issues in the analysis of how a game based platform like Mingoville can support language learning, and for instance provide input and continuity in learning.

Earlier studies in Mingoville have indicated that the platform can support self-directed learning and that the game elements of the platform can contribute to directing and engaging the child in learning (Hansbøl & Meyer 2011). Research has also shown that the role of the teacher is significant in providing continuity, meaning and qualitative feedback on the language learning that the child is involved in with Mingoville (Hanghøj, Hansbøl, Sørensen & Meyer 2010). However, in our field studies we often observed that teachers found it difficult to have a role in the interaction that the children had with Mingoville, and that some teachers would try to direct the learning, and others would let children explore the platform on their own (Meyer 2010). The difficulty of teachers' intervention was partly related to the fact that Mingoville was understood as a game based learning environment and that gaming was understood as something that children usually engage in and explore without the intervention of a teacher or adult. In addition to this, analysis showed that teacher intervention in learning processes with specifically Mingoville School was in some cases replaced by the presence of an avatar teacher (a Mingo acting as a teacher) in the platform - and that this teacher avatar might sometimes act as a substitute teacher by giving both positive and corrective feedback to the pupil (Meyer & Sørensen 2011). In Mingoville Virtual World there is no teacher avatar, as the Virtual World is meant to support play and learn activities, primarily out of school. Restrictions and intervention in the platform are, however, built into the safe chat function, which does not allow the child to write his or her name, address, telephone number etc. Adult intervention is thus indirectly present in Mingoville Virtual World, however not in the form of feedback on the pupil's work with the language.

Mingoville Preschool targets very young children and their learning both in and out of school and must therefore work with feedback and teacher intervention in a number of different ways. The platform is, as mentioned earlier, meant to be interacted with by the child alone (or with a parent or peers) outside school – in e.g. kindergarten or at home – as well as in school where it should be adaptable to learning processes planned and directed by teachers. Adult intervention may be extremely significant if Mingoville preschool is to move beyond drilling and into contextualised and curricularised learning. Therefore, the designers of Mingoville preschool are currently working on a teacher guide which aims to support teachers in using Mingoville preschool for young learners at the preschool or early school levels.

Feedback and intervention in Mingoville school is supported by a number of design features, some which are platform internal and some which are platform external and require the presence of an adult guide, parent or teacher. Internal feedback includes primarily positive feedback that is integrated into the loop of tasks, so that the child will get the feeling of being constantly led on to new tasks, and

supported in his or her understanding that he or she is doing well. The nature of the internal feedback has, according to the company, been under pressure in some parts of the world, where there is a strong tradition for assessment and testing of pupils rather than confidence building. The company however insists that the role of the internal feedback is primarily to support engagement in learning (positive feedback) and guidance (corrective feedback) and not to assess pupils' performance. This may be particularly significant in connection with very young children who are just starting to learn the language.



Figure 2: Matching images with sounds in Mingoville Preschool

A significant design factor in connection with platform internal feedback has, according to the company, been to relate feedback to the game features of the platform, i.e. to implement feedback as an aspect of reward. Reward is understood as something that will support both extrinsic and intrinsic motivation (Malone 1981), in the sense that rewarding children for learning will give the child satisfaction with learning and achievement and therefore, it is suggested, motivate the child to play and learn for his or her own purposes.

One way in which the platform works with rewarding the child is through the feature of a tree that grows from a seedling that the child plants. The tree becomes a visualization of the growth of the child's knowledge, as the child completes more tasks and fills up the growing tree with vocabulary learned. The metaphor of the tree thus works both as a visualization for the child of his or her achievements and for the parent or educator who may be interested in the child's educational progress. In this sense the reward tree addresses the issues of continuity, progress and performance in language learning by supplying an organic image of learning and achievement to the child as well as to possible educators/parents. This to a large extent counters the idea of testing and assessing performance as part of curricularized knowledge.

The child's reward of playing the games in Mingoville school is therefore both for the child and the educator/parent seeing the growth of knowledge represented by the vocabulary learned and the tasks done that make the tree grow. In addition to this the child is rewarded 'in kind' as the growth of the tree is paralleled with the filling of a pink bar in the right hand part of the picture that will eventually allow the child to acquire items that the child may want in order to customize his or her Mingos. Whether this kind of game related feedback will contribute to the intrinsic motivation of children for learning English remains to be explored by research, however, the purpose of this analysis is primarily to identify aspects of feedback that may support the child in playing and learning on his or her own, and in responding positively to feedback by persisting in solving tasks.



Figure 3: The reward tree in Mingoville Preschool

If we turn to the company's idea about platform external kinds of feedback, the teacher has a significant role to play as the classroom manager and gate keeper of the use of games in school. Whereas platform internal feedback is related to using the platform as the sole approach to learning the language, the company sees the role of Mingoville Preschool in schools as being just one way of engaging in learning, where the child is engaged in different kinds of activities and participates in different kinds of learning, e.g. self-directed, teacher directed or peer to peer led. In school, using Mingoville may, according to the company, in itself be a reward, for instance if the child or children are allowed to play the games in a classroom environment of learning. When it is positioned as being a reward after learning Mingoville may transform its purpose and identity from something to be learned with to something that can be played with while maintaining the pupil in learning. Similarly, the platform can be an inspiration for different activities in the classroom that do not involve using the platform, but refers to what has been learned through Mingoville. The vocabulary learned in Mingoville can for instance be used in classroom games defined by the teacher or pupils, or be part of a group work that children are engaging in and that is managed by the teacher. This proliferation of platform uses in classrooms may support the interplay of playing and learning that may be relevant for this age group – and may involve Mingoville in many kinds of learning. The versatility and adaptability of Mingoville will therefore contribute to negotiating national and local interpretations of feedback, interaction and learn and play practices in preschool education and learning.

7. Conclusions

Games are notoriously difficult to integrate into formal education. At the same time the digitalisation of learning games provides teachers and learners with materials and possibilities for both self-directed and teacher led learning in a variety of contexts. Learning games can be used for both entertainment and learning and can therefore make connections between different sites of learning – or operate between them as a third space or a third actor in education and learning.

Mingoville Preschool is a game based platform that uses its versatility and adaptability to address needs in the market that arise from a growing political and parental pressure on introducing English to preschool children. In this role Mingoville situates itself between formal and informal contexts for learning and between play and learn activities that can and should be negotiated locally. Mingoville also addresses the need for increased input in language learning, and for qualified feedback and children's language production. Feedback becomes a major issue in the design of a game based learning platform like Mingoville, because platform internal and external ways of providing feedback will contribute to ensuring a space for the platform in preschool learning. An analysis of the redesign of the platform from school to preschool orientation confirms that forms of feedback are proliferating with the redesign of the platform and that positive and organic approaches to and visualisations of

feedback dominate in accordance with tendencies within Nordic and European approaches to language learning. These are believed to work well with new forms of interaction provided by emergent technologies like iPads that may support intuitive forms of navigation that will suit the needs and the learning of very young learners. However, a challenge for the distribution of the platform in different local contexts will be the integration of game based learning material in curricula, school cultures and home environments. How will Mingoville Preschool correspond to the needs of different pupils, school cultures etc.? To what extent will the teacher guide developed by the company assist teachers in using games, and how will for instance the use of iPads change learning environments for very young learners? These questions must be researched in context through empirical investigation. Further research will therefore, it is expected, provide information about how Mingoville Preschool supports children in practice, how it is negotiated, and how new features of design will help the distribution of the platform in learning and entertainment environments.

I have presented Mingoville as an example of how the design of a learning platform for English as a foreign language can be conceptualised for preschool children. My analysis suggests that designers of game based material for young language learners should be aware of the following:

- There is a growing market for teaching English to young learners, where game based learning may have a significant role to play, as there is a strong connection between game based learning and language learning both in and outside school. New technologies such as tablets may support, qualify and intensify the ways in which games are used for language learning
- Game based learning through digital platforms can provide learners with more time for interacting with the language and increased exposure to the target language, as pupils can work with the language in their own time and space after school. However, what is significant in relation to specifically young learners is not only to provide input, but to qualify exposure to the target language with continuity in tasks and immediate feedback that will engage the learner in continuing to learn.
- Feedback should be adapted to the variety of contexts in which the child can learn the language, i.e. both in school with a teacher and outside school with a parent or alone. However, though careful design and market opportunities may support the role of game based material for young learners both in and out of school, there are still many barriers to using games in formal language learning. Supporting children in learning a language with games before they start school may pave the way for game based learning in school – however, more empirical research is needed to understand how exactly game based learning can be transformed from preschool to in-school language learning.

References

- Anderson-Levitt, K. (ed.) (2003) *Local meanings, global schooling: anthropology and world culture theory*. New York: Palgrave MacMillan
- Balra, A. (1990) 'Language Learning Through Computer Adventure Games', *Simulation & Gaming* vol 21, no 4, pp. 445-452
- Blondin, C., Candelier, M., Edelenbos, P., Johnstone, R., Kubanek-German, A. and Taeschner, T. (1998) *Foreign languages in primary and preschool education: Context and outcomes. A review of recent research within the European Union*. London: CILT
- Burden, K., Hopkins, P., Male, T., Martin, S. and Trala, C. (2012) *iPad Scotland Evaluation*. University of Hull
- Coleman, D.W. (2002) 'On foot in Sim City: Using SIM COPTER as the basis for an ESL writing assignment', *Simulation and Gaming* vol. 33, no. 2, pp. 217-230
- Crookall, D. and Oxford, R.L. (eds.) (1990) *Simulation, Gaming, and Language Learning*. New York: Newbury House Publishers
- Crookall, D. (2007) 'Editorial. Second language acquisition and simulation.'. *Simulation and Gaming*. Vol. 38, no. 1, pp. 6-8
- Edelenbos, P., Johnstone, R. & Kubanek, A. (2006) *The main pedagogical principles underlying the teaching of languages to very young learners*. European Commission
- Egenfeldt-Nielsen, S. (2011) 'International survey of the experience and perceptions of teachers', in Egenfeldt-Nielsen, S., Sørensen, B. H. and Meyer, B. (eds.) *Serious Games in Education – a Global Perspective*. Aarhus: Aarhus University Press
- Egenfeldt-Nielsen, S., Sørensen, B. H. and Meyer, B. (eds.) (2011) *Serious Games in Education – a Global Perspective*. Aarhus: Aarhus University Press
- Garcia-Carbonell, A., Rising, B., Montero, B., and Watts, F. (2001) : 'Simulation/gaming and the acquisition of communicative competence in another language', *Simulation and gaming* vol. 32, no. 4, pp. 481-491
- Gaudart, H. (1999) 'Games as teaching tools for teaching English to speakers of other languages', *Simulation & Gaming* vol. 30, no. 3, pp. 283-291

- Graddol (2006) *English next*. British Council. <http://www.britishcouncil.org/learning-research-english-next.pdf>
- Halleck, G. (2007) 'Guest editorial. Second language acquisition and simulation'. *Simulation and Gaming*. Vol. 38, no. 1, 31-34
- Hanghøj, T., Hansbøl, M., Sørensen, B. H., and Meyer, B. (2010). 'Læringspil, lærerroller og didaktisk design' ('Game based learning, teachers' roles and educational design') *Dansk Pædagogisk Tidsskrift*, vol. 58, no. 4, pp. 25-32.
- Hansen, A.D, Bech, S.L., and Plum, M. (2004) *Spillet om læring – en diskursanalyse af brugen af læring på dagtilbudsområdet (a discourse analysis of learning as a contested field in preschool)*. Copenhagen: Learning Lab Denmark
- Hansbøl, M., and Meyer, B. (2011). 'Shifting ontologies of a serious game and its relationships with English education for beginners', Friesen, N. (ed.) *Media: Digital, ecological and epistemological. Special issue of E-Learning and Digital Media*, vol. 8, no. 3, pp. 228-246.
- Hymes, D. (1979) 'On communicative competence', in Brumfit, C. & Johnson, K. (eds.) *The communicative approach to language teaching*. Oxford: Oxford University Press
- Jensen, A.S., Broström, S. and Hansen, O.H. (2010) *Critical perspectives on Danish early childhood education and care – between the technical and the political*. Copenhagen: The Danish School of education, Aarhus University
- Kinash, S., Brand, J. and Mathew, T. (2012) 'Challenging mobile learning discourse through research: Student perceptions of Blackboard Mobile Learn and iPads', *Australian Journal of Educational Technology*, vol. 28, no. 4, pp. 639-655.
- Li, R-C and Topolewski, D. (2002) : 'ZIP & TERRY: a new attempt at designing language learning simulation', *Simulation and Gaming* vol. 33, no. 2, pp.181-186.
- Malone, T.W. (1981) 'Toward a theory of intrinsically motivating instruction', *Cognitive Science* Vol. 5, issue 4. Pp. 333-369
- Melhuish, K. & Falloon, G. (2010) 'Looking to the future: M-Learning with the iPad', *Computers in New Zealand Schools: Learning, teaching, technology*, vol. 22, no. 3, pp.1-15
- Meyer, B. (2001) 'Den globale dialog – selvkonstruktion og sproglig interaktion i internationale chatrooms' ('The global dialogue – the construction of selves and language interaction in international chatrooms') in Sørensen, B.H. (ed.) *Chat. Leg, identitet, socialitet og læring (Chatting. Play, identity, sociality and learning)*, Copenhagen: Gads Forlag
- Meyer, B. (2006). 'Sprog med it: it med sprog' ('Languages with ICT, ICT with languages'), in Buhl, M., Meyer, B. and Sørensen, B. (eds.) *Medier og it: læringspotentialer (Media and ICT: learning potential)*. Copenhagen: Danmarks Pædagogiske Universitetsforlag.
- Meyer, B. (2010) 'Learning English through serious games - reflections on teacher and learner performance' *Transactions on Edutainment III*. Berlin: Springer, pp. 82-92.
- Meyer, B., Sørensen, B., Hanghøj, T. and Birch Andreasen, L. (2011) 'Making connections – local and global issues in researching the policy of serious games in education', in Egenfeldt-Nielsen, S., Sørensen, B. H. and Meyer, B. (eds.) *Serious Games in Education – a Global Perspective*. Aarhus: Aarhus University Press
- Ortega, L. (1997) 'Processes and outcomes in networked classroom interaction: Defining the research agenda for L2 computer-assisted classroom discussion', *Language Learning & Technology* vol. 1, no.1, pp. 82-93
- Peterson, M (2010) 'Computerized Games and Simulations in Computer-Assisted Language Learning: A Meta-Analysis of Research'. *Simulation and Gaming*. Vol.41, no. 1, pp.72-93
- Ranalli, J. (2008) 'Learning English with the Sims: exploiting authentic computer simulation games for L2 learning', *Computer Assisted Language Learning* vol. 21, no.5, pp.441-455
- Scanlon, M. and Buckingham, D. (2007) 'Home learning and the educational marketplace', *Oxford review of education* vol. 30, no. 2, pp. 287-303
- Sharrock, W.W. and Watson, D.R. (1987) "'Power" and "realism" in simulations and gaming: Some pedagogic and analytic observations', in Crookall, D., Greenblat, A., Coote, J., Klabbers, J & Watson, D. (Eds.) *Simulation-gaming in the late 1980's*. Oxford: Pergamon
- Shore, C. & Wright, S. (eds.) (1997) *Anthropology of Policy*. New York: Routledge
- Sørensen, B.H. and Olesen, B. (eds.) (2000) *Børn i en digital kultur. Forsningsperspektiver (Children in a learning culture. Research perspectives)*. Copenhagen: Gads Forlag
- Sørensen, B. H. (2009). 'Didaktisk design för "seriösa spel"' ('Educational design for serious games'), in Selander, S. and Svärdemo-Åberg, E. (eds.). *Didaktisk design i digital miljö: nye möjligheter för lärande (Educational design for digital environments: new potentials for learners)* Stockholm: Liber.
- Sørensen, B.H. (2011) 'Educational design for serious games', in Egenfeldt-Nielsen, S., Sørensen, B. H. and Meyer, B. (eds.) *Serious Games in Education – in a Global Perspective*. Aarhus: Aarhus University Press
- Sørensen, B.H. and Meyer, B. (2011) 'Educational design for learning games', in Egenfeldt-Nielsen, S., Sørensen, B. H. & Meyer, B. (eds.) *Serious Games in Education – a Global Perspective*. Aarhus: Aarhus University Press
- Wagner, J. (1990) *Kommunikative spil i fremmedsprogundervisningen (Communicative games in foreign language education)* Vejlen: Ålække
- Waschk, K. (2004) 'Lernverhalten von Kindern im offenen Fremdsprachenunterricht mit Multimedia und Lernsoftware', *Frühes Deutsch* vol. 2, pp. 21-23